

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A method for heat treating a plurality of conductive interconnect structures attached to a substrate, the method comprising the steps of:

providing a contactor comprising a substrate and a plurality of conductive interconnect structures;

placing the contactor in an oscillating electromagnetic field, the oscillating electromagnetic field heating the interconnect structures without substantially heating the substrate; and

maintaining the contactor in the oscillating electromagnetic field until each of the interconnect structures obtains a defined heat-treatment temperature substantially greater than an ambient temperature for a predetermined period of time sufficient to permanently change a mechanical operating property of the interconnect structure,

further comprising tuning a frequency of the oscillating electromagnetic field to between about 10 MHz-15 MHz.

Claim 2 (Previously presented): The method according to Claim 1, wherein the interconnect structures are comprised of a ferromagnetic material.

Claim 3 (Previously presented): The method according to Claim 2, wherein the ferromagnetic material is a nickel-cobalt alloy.

Claim 4 (Original): The method according to Claim 2, further comprising tuning the oscillating electromagnetic field to selectively heat the ferromagnetic material.

Claim 5 (Original): The method according to Claim 1, wherein the maintaining step further comprises obtaining the heat-treatment temperature greater than 800°C.

Claim 6 (Currently amended): ~~The method according to Claim 1,~~ A method for heat treating a plurality of conductive interconnect structures attached to a substrate, the method comprising the steps of:

providing a contactor comprising a substrate and a plurality of conductive interconnect structures;

placing the contactor in an oscillating electromagnetic field, the oscillating electromagnetic field heating the interconnect structures without substantially heating the substrate; and

maintaining the contactor in the oscillating electromagnetic field until each of the interconnect structures obtains a defined heat-treatment temperature substantially greater than an ambient temperature for a predetermined period of time sufficient to permanently change a mechanical operating property of the interconnect structure,

wherein the maintaining step further comprises obtaining the heat-treatment temperature greater than 1300°C.

Claim 7 (Original): The method according to Claim 1, further comprising generating the oscillating electromagnetic field between a pair of parallel plates.

Claim 8 (Original): The method according to Claim 1, further comprising generating the oscillating electromagnetic field between arms of a hairpin coil.

Claim 9 (Original): The method according to Claim 1, further comprising generating the oscillating electromagnetic field using a coil comprised of a copper tube formed into a coil shape.

Claim 10 (Previously presented): The method according to Claim 1, further comprising tuning a frequency of the oscillating electromagnetic field to a resonant frequency of a field generator circuit.

Claim 11 (Canceled)

Claim 12 (Previously presented): The method according to Claim 1, further comprising measuring a temperature of the interconnect structures by applying a heat-indicating paint to the plurality of interconnect structures prior to the maintaining step.

Claims 13-15 (Canceled)

Claim 16 (Previously presented): The method according to Claim 1 wherein the mechanical operating property of the interconnect structures changed is at least one of greater yield strength, greater resistance to fatigue, decreased brittleness, or greater hardness.

Claim 17 (Previously presented): The method according to Claim 1, wherein the contactor comprises an interposer and the plurality of conductive interconnect structures are disposed on opposing sides of the substrate.

Claim 18 (Previously presented): The method according to Claim 1, wherein the contactor is for contacting a semiconductor wafer.

Claim 19 (Previously presented): The method according to Claim 1, wherein the interconnect structures are springs.

Claim 20 (Previously presented): The method according to claim 19, wherein the mechanical operating property of the interconnect structures changed is a spring characteristic of the interconnect substrates.

Claim 21 (Previously presented): The method according to claim 1, wherein each of the interconnect structures is attached to a terminal on the substrate and comprises a contact tip disposed away from the substrate.

Claim 22 (Previously presented): The method according to claim 21 further comprising:
removing the contactor from the oscillating electromagnetic field; and
cooling the interconnect structures to the ambient temperature.

Claim 23 (Canceled)

Claim 24 (Previously presented): The method of claim 1, wherein the maintaining step comprises heating the interconnect structures to a temperature that is less than the melting temperature of the interconnect structures.

Claim 25 (Previously presented): The method of claim 1, wherein the oscillating electromagnetic field induces electrical currents in the interconnect structures.

Claims 26-29 (Canceled)